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10/007,024

11/05/2001

Johnny R. Brezina

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7895

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03/29/2005

EXAMINER

LEUNG, CHRISTINA Y

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ART UNIT

PAPER NUMBER

2633

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/007,024

Applicant(s)

BREZINA ET AL.

Examiner

Christina Y. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 8, 10 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 9 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11-05-01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Although the instant application states "This application claims priority to United States Patent Application Serial Number 09/956,771 filed on September 20, 2001" on page 1 of the specification, Applicants have not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

In this case, the disclosures of 09/956,771 and the instant application are substantially different. For example, 09/956,771 appears to be primarily directed to a method of dissipating heat in an optical transceiver and does not refer at all to monitor signal detectors or generators as claimed in the instant application.

### ***Drawings***

2. The drawings are objected to because the elements in the figures should include descriptive as well as numeric labels. In particular, elements in Figure 1 (such as elements 12, 16, 22, 24, and 34) are currently represented only by blank blocks; descriptive labels should be included in the figure in order to allow the figure to be more easily understood in the art.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 7, 8, 10, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degura (US 5,684,614 A) in view of Ito (US 6,658,214 B1).

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Regarding claims 1 and 10, Degura discloses an apparatus for controlling an optical transceiver (Figure 2) having an optical signal generator (electro-optical converter 13) and a detector (main signal detector 18), the apparatus comprising:

- an output lens 14 for transmitting an optical output signal from the generator 13;

- a monitor optical signal generator for generating a reference optical signal (i.e., the transmitter including a pilot signal generator located at a identical, opposing transceiver, disclosed but not explicitly shown in Figure 2; column 4, lines 34-46);

- a monitor optical signal detector (angle deviation detector 19) for receiving the reference optical signal (column 4, lines 42-46); and

- a reflective surface (including beam splitter 17; column 3, lines 63-67; column 4, lines 1-3) adapted for receiving the reference signal from the monitor optical signal generator and for directing the reference signal to the monitor optical signal detector (column 4, lines 34-46).

Regarding claim 10 in particular, Degura discloses additional reflective surfaces, including element 16, which has a first reflective segment adapted for receiving the reference optical signal from the monitor optical signal generator and a second reflective segment thereof for directing the reference optical signal to the monitor output signal detector.

Degura discloses that the detector 18 receives an optical input signal (column 4, lines 40-42) but does not specifically disclose an input lens for directing an optical input signal at the detector. Degura also does not specifically disclose a lens housing.

However, Ito teaches a system related to the one disclosed by Degura, including an optical signal generator 20, detector 28, output lens 21, and reflective surfaces (Figures 4 and 5). Ito further teaches an input lens 27 for receiving and directing an optical input signal at the

detector 28 (column 7, lines 7-13). Ito also teaches a housing to mount the output lens, input lens, and reflective surfaces (column 3, lines 50-52).

Regarding both claims 1 and 10, it would have been obvious to a person of ordinary skill in the art to include an input lens as taught by Ito in the system disclosed by Degura in order to ensure that incoming light is properly focused and received by the detector element. It also would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the system disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Regarding claim 2, Degura discloses that the reference optical signal is substantially identical the optical output signal. The output optical signal generated by the optical signal generator 13 as discussed above also includes a pilot signal “substantially identical” to the reference/pilot signal generated by the monitor optical signal generator from the opposite side.

Regarding claim 3, Degura discloses a controller (system control unit 26) adapted for receiving a monitoring signal from the monitor optical signal detector 19 indicative of the reference optical signal, and for controlling the output optical signal of the generator in response to the monitoring signal (the system control unit 26 controls the output optical signal of the generator using beam variable means 29, for example; column 4, lines 55-63; column 5, lines 53-62).

Regarding claim 5, Degura discloses that the reflective surface (such as reflective element 16) includes a first and a second reflective segment thereof, with the first reflective segment adapted for receiving the reference optical signal from the monitor optical signal generator and directing the reference optical signal to the second reflective segment, and with the

second reflective segment adapted for receiving the reference signal from the first reflective segment and directing the reference signal to the monitor optical signal detector.

Regarding claim 7, Degura discloses that the optical output and input signals are directed through the system substantially parallel to one another (the output and input signals travel along the same path in a parallel fashion between element 15 and the outside environment).

Regarding claim 8, Degura discloses that the reference optical signal travels to and from the lens housing in substantially parallel fashion (the reference signals sent from the device and the reference signals received from the opposite device travel along the same path in a parallel fashion between element 15 and the outside environment).

Regarding claim 12, Degura discloses a method for controlling an optical transceiver (Figure 2) having an optical signal generator (electro-optical converter 13) and an optical signal detector (main signal detector 18), the method comprising:

providing a monitor optical signal generator for generating a reference optical signal (i.e., the transmitter including a pilot signal generator located at a identical, opposing transceiver, disclosed but not explicitly shown in Figure 2; column 4, lines 34-46); and a monitor optical signal detector (angle deviation detector 19) for receiving the reference optical signal (column 4, lines 42-46);

mounting an output lens in a system having a reflective surface (including reflective elements 16 and 17) for receiving the reference optical signal from the monitor optical signal generator and directing the reference optical signal to the monitor optical signal detector;

generating an optical output signal from the optical signal generator 13;

directing the output optical signal through the output lens 14;

receiving and directing the optical input signal to the optical signal detector 18;  
generating a reference optical signal with the monitor optical signal generator (using pilot signal generator 12 in the opposing transceiver; column 4, lines 34-46);  
receiving the reference optical signal at the reflective surface of the lens housing; and  
directing the reference signal to the monitor optical signal detector (reflective surface 17 reflects the reference signal to the monitor optical signal detector 19).

Again, Degura discloses that the detector 18 receives an optical input signal (column 4, lines 40-42) but does not specifically disclose an input lens for directing an optical input signal at the detector. Degura also does not specifically disclose a lens housing.

However, Ito teaches a system related to the one disclosed by Degura, including an optical signal generator 20, detector 28, output lens 21, and reflective surfaces (Figures 4 and 5). Ito further teaches an input lens 27 for receiving and directing an optical input signal at the detector 28 (column 7, lines 7-13). Ito also teaches a housing to mount the output lens, input lens, and reflective surfaces (column 3, lines 50-52).

Regarding claim 12, it would have been obvious to a person of ordinary skill in the art to include an input lens as taught by Ito in the method disclosed by Degura in order to ensure that incoming light is properly focused and received by the detector element. It also would have been obvious to a person of ordinary skill in the art to include a lens housing as taught by Ito in the method disclosed by Degura in order to protect the components from the external environment as well as to connect and properly align the optical components.

Regarding claim 13, Degura discloses operating the monitor optical signal generator with a reference signal substantially identical to the output optical signal. The output optical signal



generated by the optical signal generator 13 as discussed above also includes a pilot signal “substantially identical” to the reference/pilot signal generated by the monitor optical signal generator from the opposite side.

Regarding claim 14, Degura discloses comparing the reference optical signal to a standard reference and adjusting the output optical signal to achieve a desired reference optical signal (column 5, lines 7-62). In particular, Degura discloses comparing the reference optical signal received by the angle deviation detector 19 to a reference such as a filter, having the expected frequency of the reference signal, which passes the signal if the frequency of the signal matches. Degura also discloses adjusting the output optical signal using beam variable means 29 in response to the reference optical signal (column 4, lines 55-63; column 5, lines 53-62).

Regarding claim 15, Degura discloses adjusting the output optical signal as a function of the reference optical signal received at the monitor optical signal detector. Again, Degura discloses adjusting the output optical signal using beam variable means 29 in response to the reference optical signal received at the angle deviation detector 19 (column 4, lines 55-63; column 5, lines 53-62).

***Allowable Subject Matter***

5. Claims 4, 6, 9, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art, including Degura and Ito, does not specifically disclose or fairly suggest an apparatus for controlling an optical transceiver having an optical signal generator and a detector

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including the specific combination of all the elements and limitations recited in claims 4, 6, 9, and 11 (and including all the limitations of the parent claims on which they depend), particularly wherein the optical signal generator, monitor optical signal generator, monitor optical signal detector, and optical signal detector is disposed in that order in a planar array.

*Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023. The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Christina Y Leung*  
Christina Y Leung  
Patent Examiner  
Art Unit 2633